

Attorney Docket No. 960253/HG

**IN THE UNITED STATES PATENT
AND TRADEMARK OFFICE**

Applicant(s): Mitsuru ADACHI et al.

Serial No. : 08/672,378

Filed May 28, 1996

For **METHOD AND APPARATUS FOR
SHAPING SEMISOLID METALS**

Art Unit : 1722

Examiner : R. Batten

LETTER TO THE OFFICIAL DRAFTSPERSON

Assistant Commissioner for Patents
Washington, D.C. 20231

S I R :

This is in response to the NOTICE OF DRAFTSPERSON'S PATENT
DRAWING REVIEW enclosed with the October 29, 1998 Office Action.

Submitted herewith are red inked marked-up copies showing
the changes to the drawings and formal drawings including such
changes for Figs. 25, 30, 33, 38, 43, 45, 51 and 69. Please
substitute the enclosed drawings for Figs. 25, 30, 33, 38, 43,
45, 51 and 69 as originally filed.

CERTIFICATE OF MAILING

I hereby certify that this
correspondence is being
deposited with the United
States Postal Service as First
Class mail in an envelope
addressed to: Assistant Commissioner
for Patents, Washington, D.C. 20231,
on the date noted below.

Attorney: RICHARD S. BARTH

Dated: March 26, 1999

In the event that this Paper
is late filed, and the
necessary petition for
extension of time is not filed
concurrently herewith, please
consider this as a Petition
for the requisite extension of
time, and to the extent not
tendered by check attached
hereto, authorization to
charge the extension fee,
or any other fee required
in connection with this
Paper, to Account No. 06-1378.

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APR 06 1999

GROUP 1700

It is respectfully submitted that the enclosed drawing sheets obviate the objections set forth in said NOTICE.

Respectfully submitted,



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Enclosure: red inked marked-up copies and formal drawings for
Figs. 25, 30, 33, 38, 43, 45, 51 and 69

FIG. 25

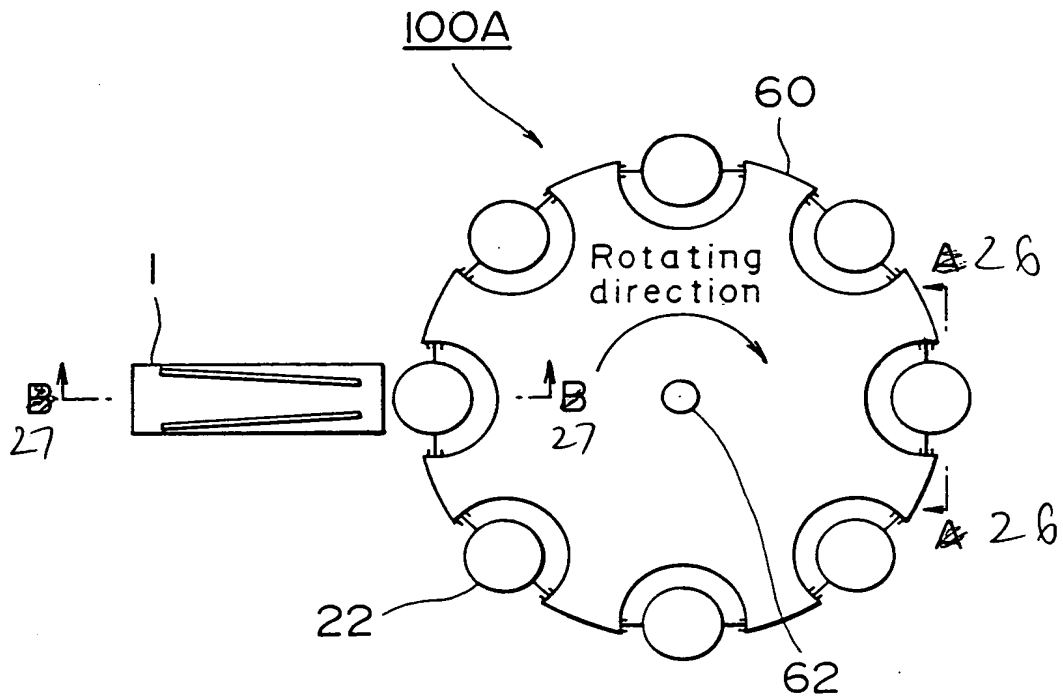


FIG. 26

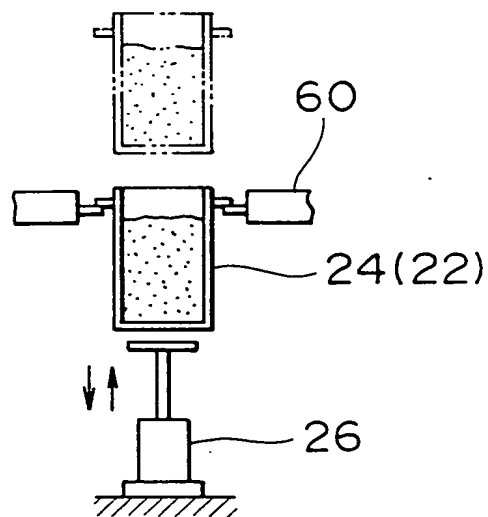


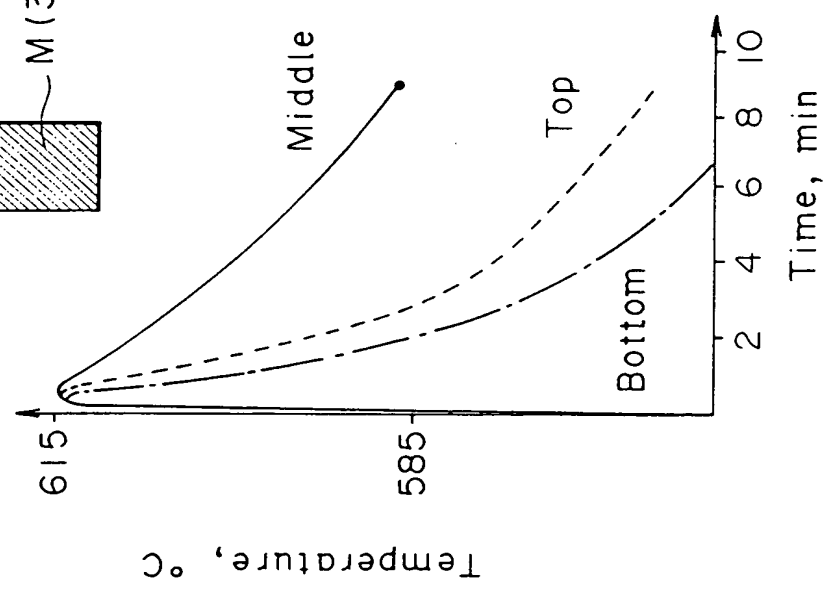
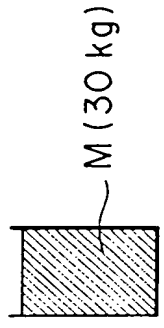
FIG. 30(a)

~~FIG. 30~~

FIG. 30(b)

Left to cool at
both top and bottom

5mm-thick stainless steel vessel



Heat-retained at top
but heated at bottom

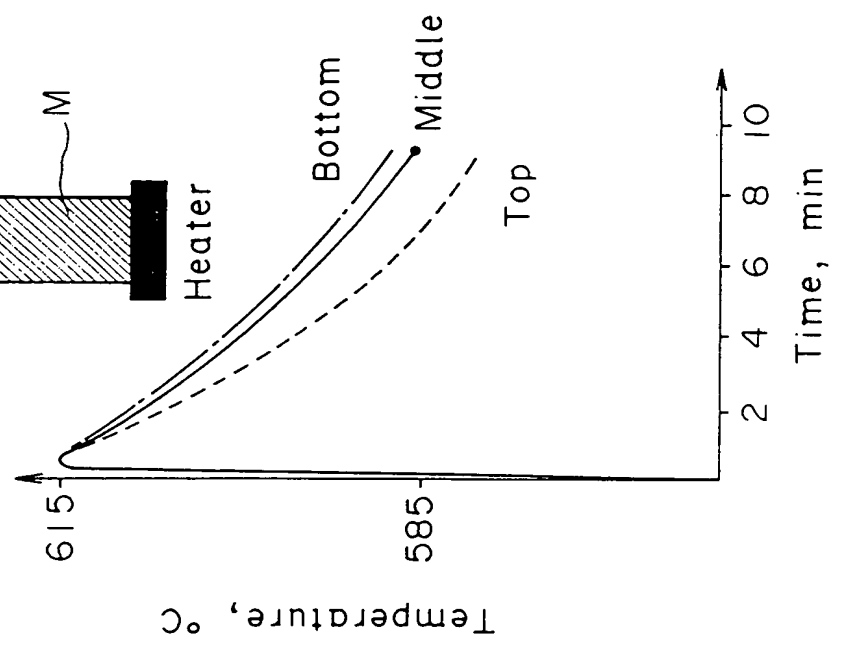
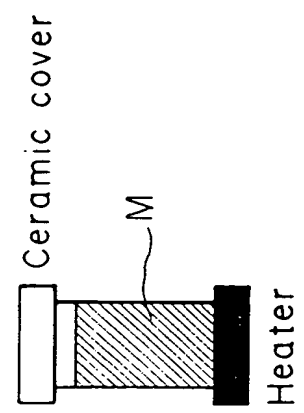


FIG. 33(a)

[Comparative]

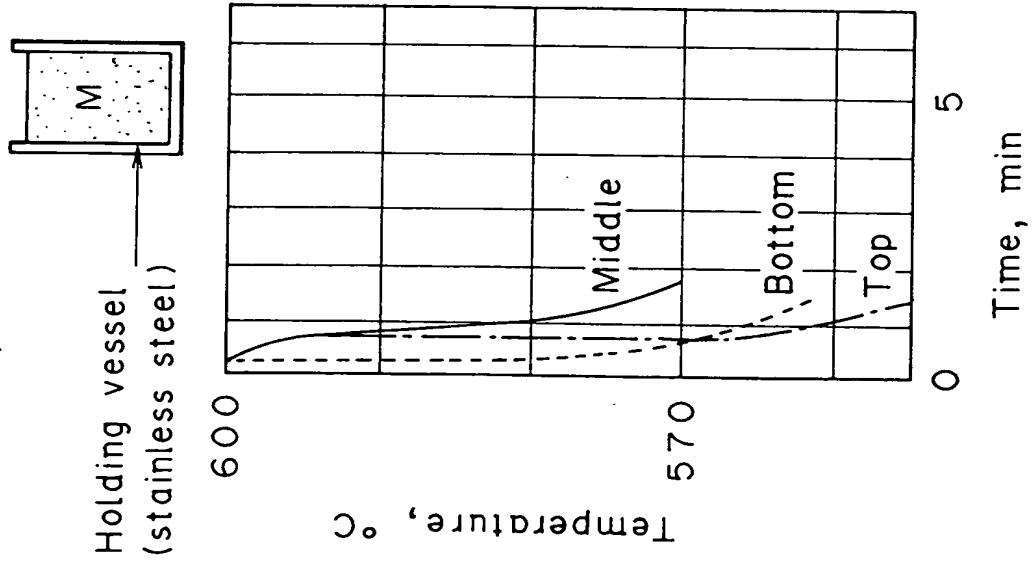


FIG. 33(b)

[Invention]

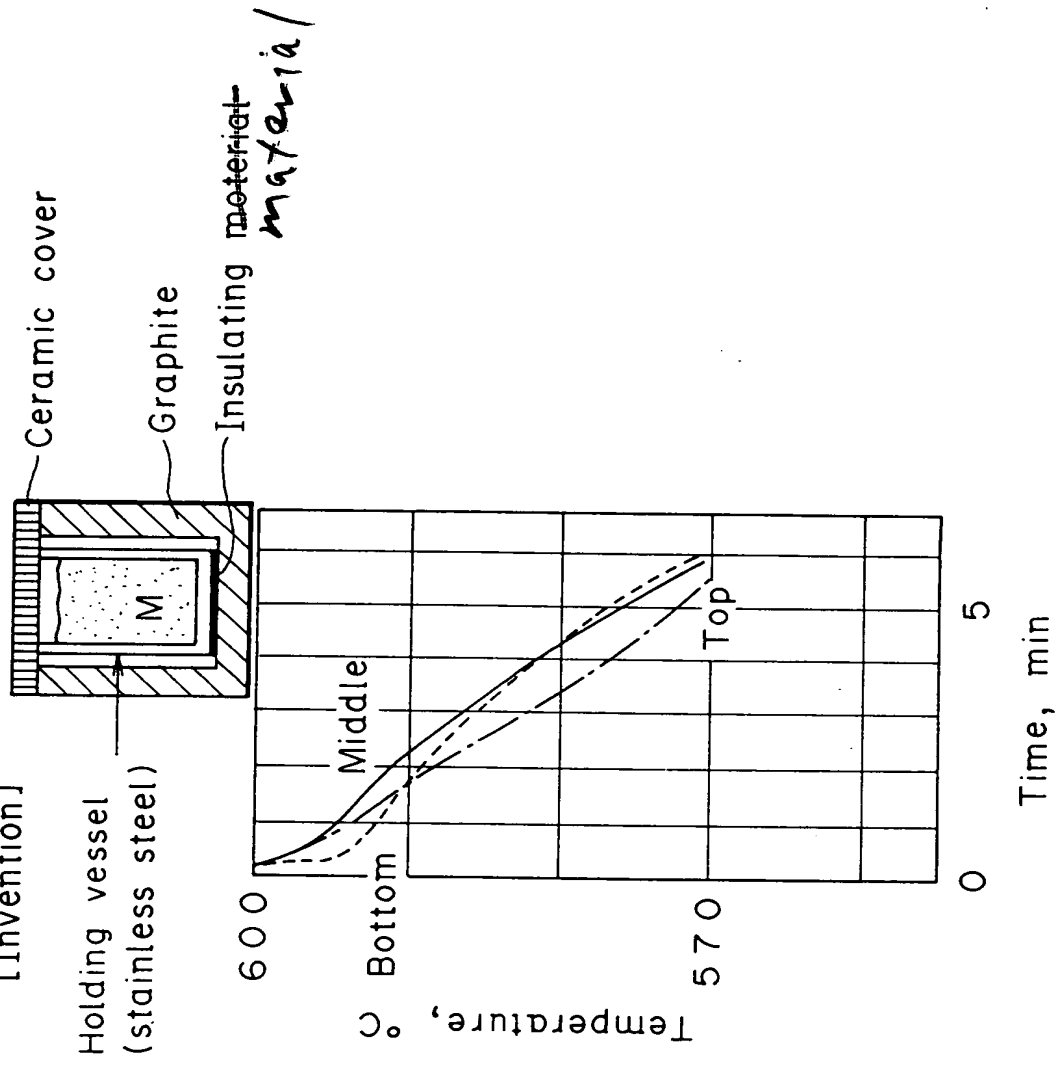
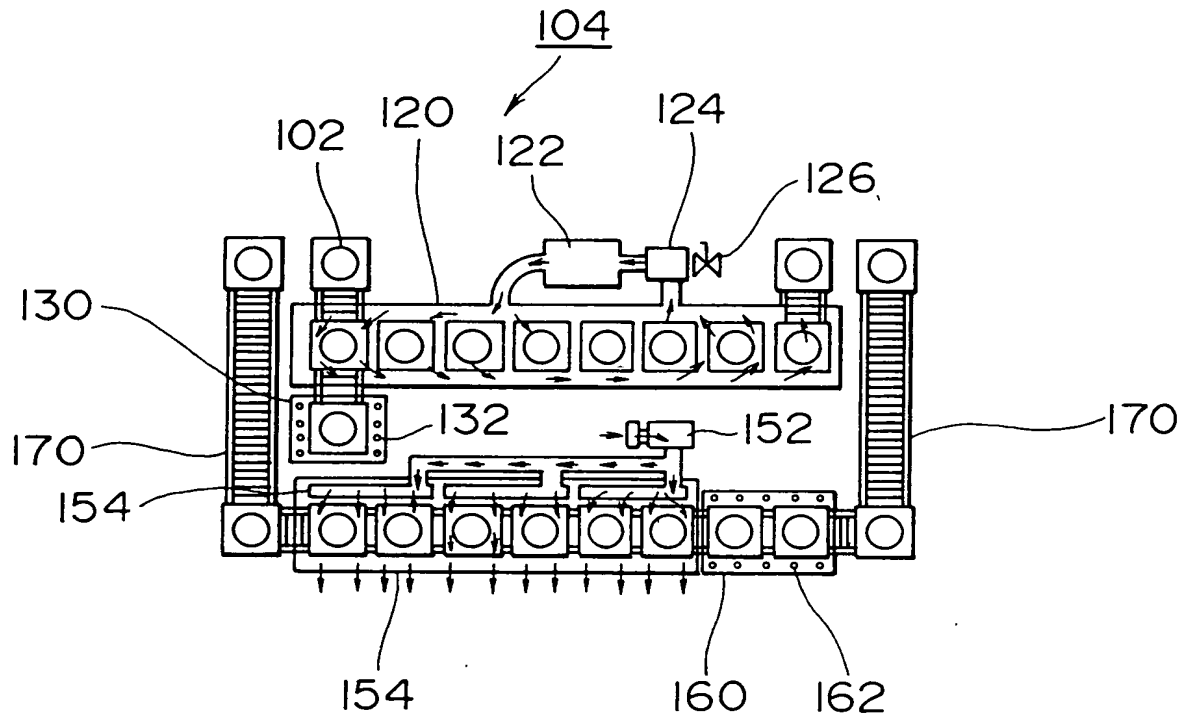
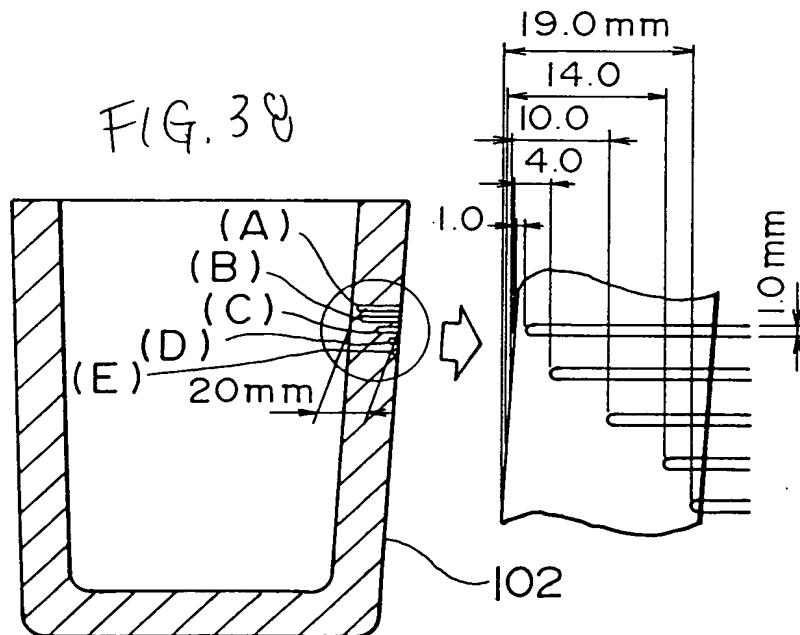


FIG. 37



~~FIG. 38~~

FIG. 38(a)



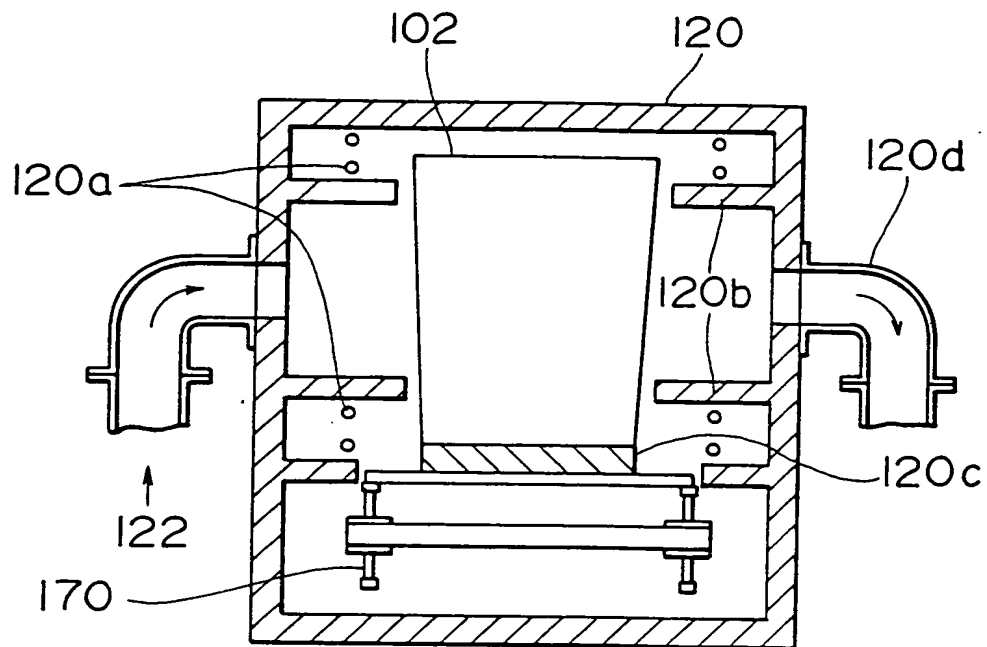


FIG. 43

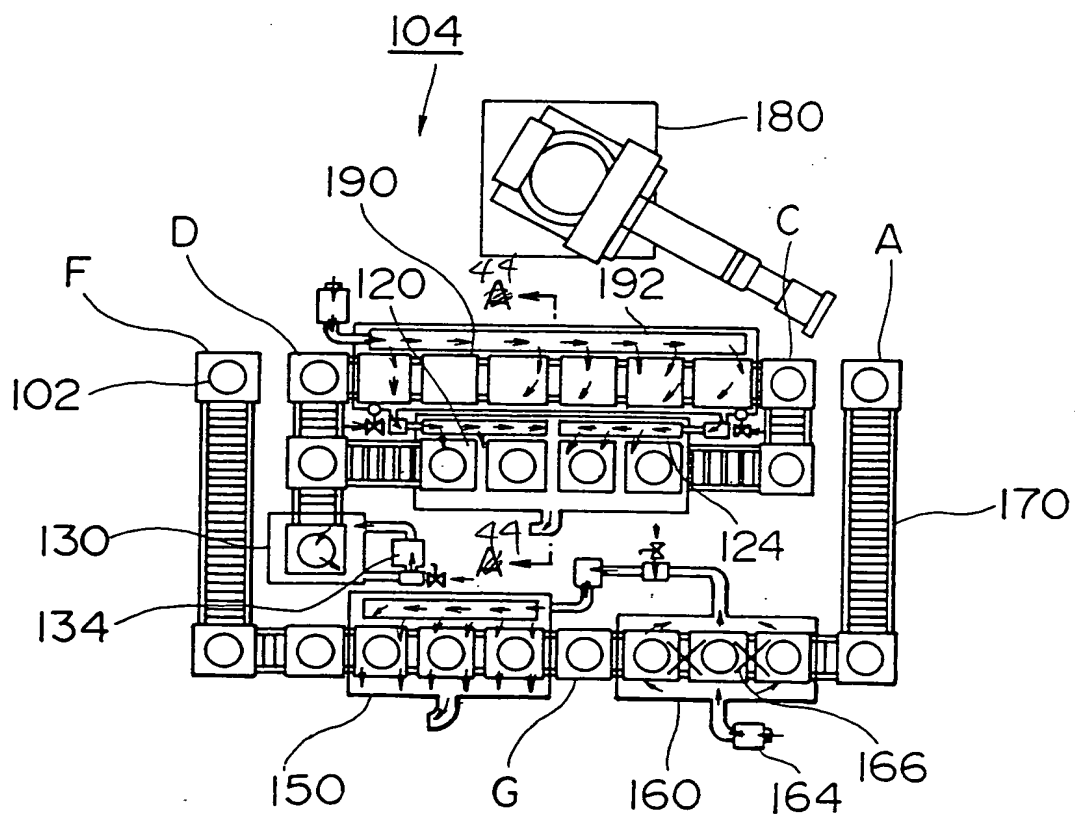


FIG. 45(b)

SUS304
preheated to 200°C

FIG. 45(c)

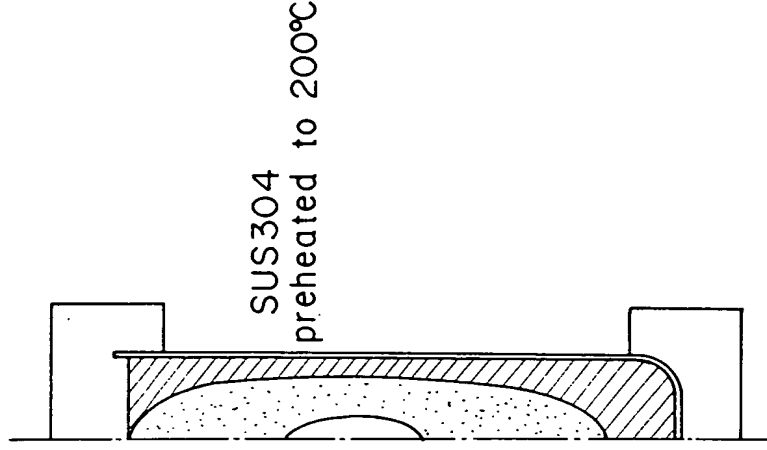
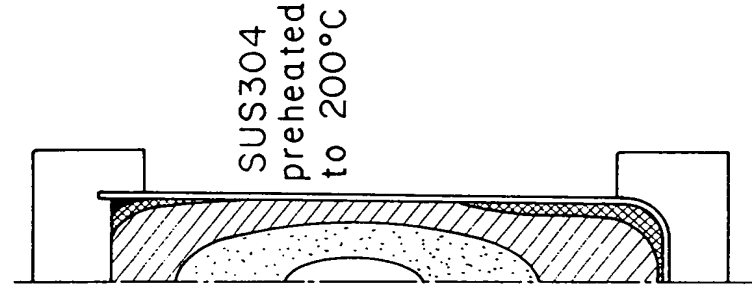
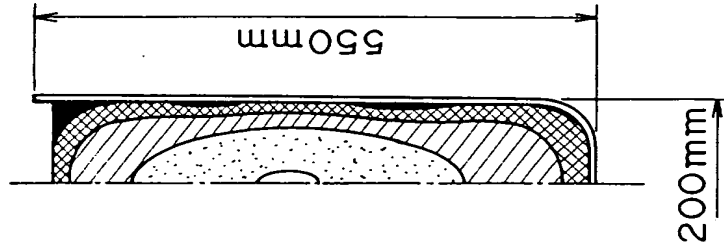
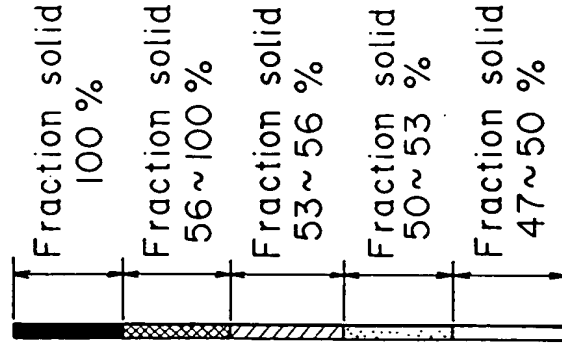
Al_2O_3 - SiO_2 composite
preheated to 200°C

FIG. 45(d)

Al_2O_3 - SiO_2 composite
preheated to 350°C

FIG. 45(a)

Temperature of
atmosphere : 200°C



Al_2O_3 - SiO_2 composite
preheated to 200°C

Al_2O_3 - SiO_2 composite
preheated to 350°C

~~FIG. 51~~

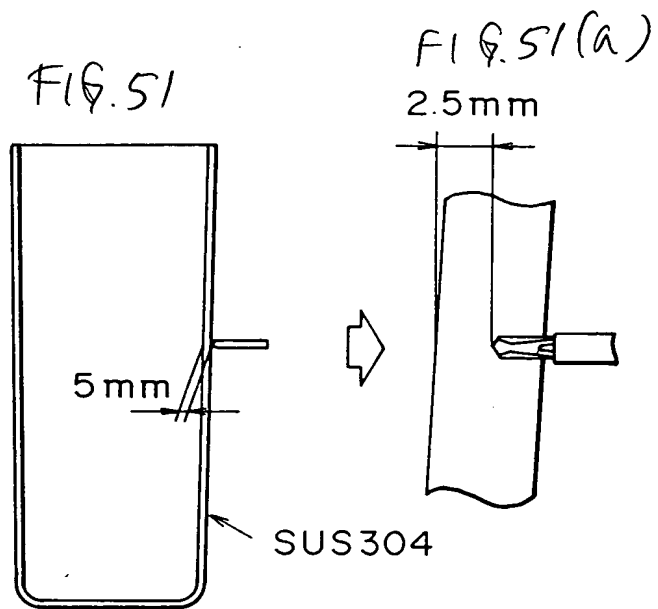


FIG. 69 (a)

(a) From a mixture of two molten metals A and B

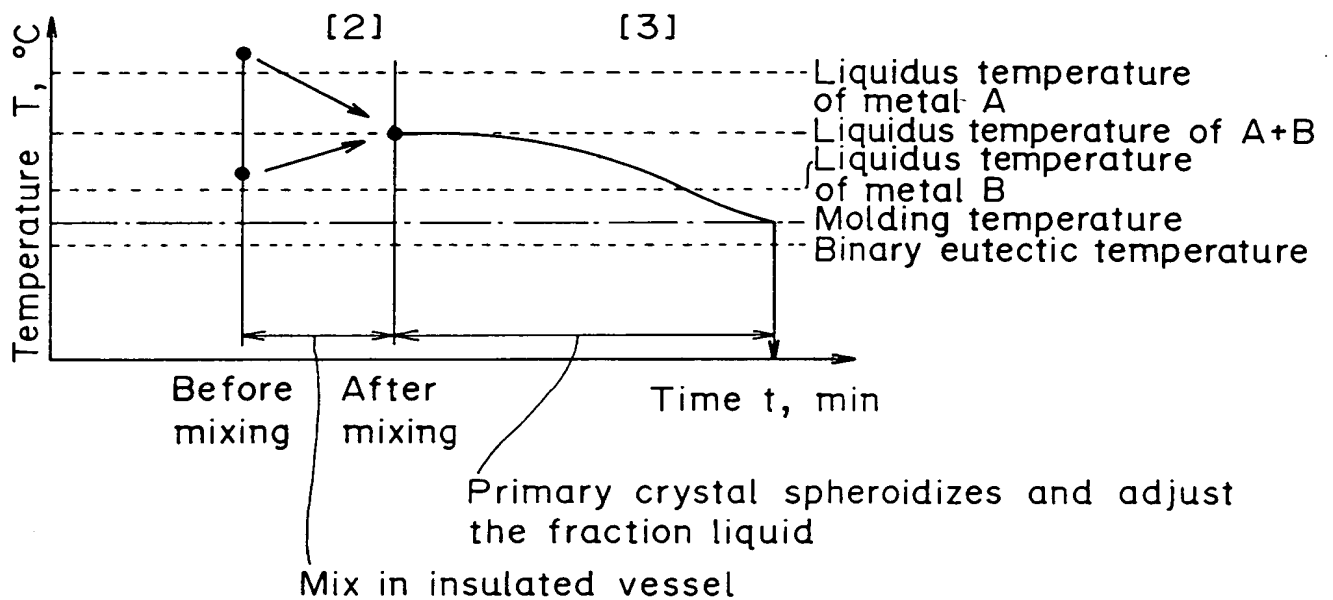


FIG. 69 (b)

(b) From two molten metals A and B (including crystal nuclei) that were mixed after cooling with cooling jig

